Pending claims are reproduced below as a convenience to the Examiner:

1. (Previously Presented) In a method for transmitting a signal from a sensor put in the human body to the outside of the human body, a method for data communication in the human body, comprising the steps of:

generating electric potential difference between transmitting electrodes comprising a first transmitting electrode having higher electric potential and a second transmitting electrode having lower electric potential, installed on the surface of a sensor;

supplying a current from the first transmitting electrode having higher electric potential to the inside of the human body to flow the current through the surface of the human body back into the inside of the human body and sinking the current to the second transmitting electrode having lower electric potential; and

inducing a voltage between receiving electrodes installed on the surface of the human body by the current flowing through the surface of the human body.

2. (Previously Presented) The method of claim 1, wherein the electric potential difference is generated by applying an electric signal of the sensor to the first and second transmitting electrodes.

3. (Previously Presented) A system for data communication in the human body, comprising:

a sensor, which is put in the human body, having transmitting electrodes installed on the surface of the sensor to be electrically isolated and for generating electric potential difference; and

a receiver installed on the surface of the human body to receive a current generated by the electric potential difference through the human body.

4. (Previously Presented) The system of claim 3, wherein the transmitting electrodes are installed on the surface of the sensor to be electrically isolated.

5. (Previously Presented) The system of claim 3, wherein the transmitting electrodes are electrically connected with an internal circuit of the sensor to receive an electric signal generated from the internal circuit.

6. (Previously Presented) The system of claim 4, wherein the transmitting sensor is three-dimensionally formed.

7. (Previously Presented) The system of claim 6, wherein the sensor includes a first electrode and a second electrode which surround both ends of the sensor.

8. (Previously Presented) The system of claim 6, wherein the sensor includes a first electrode surrounding an end of the sensor and a second electrode covering the other end of the sensor as a band shape.

9. (Previously Presented) The system of claim 6, wherein the sensor includes a first electrode and a second electrode respectively covering both ends of the sensor as a band shape.

10. (Previously Presented) The system of claim 6, wherein the sensor includes a first electrode and a second electrode symmetrically formed along a longer axis of the sensor.

11. (Previously Presented) The system of claim 3, wherein the surface of the sensor for isolating of the transmitting electrodes is made of one of peek, polyethylene and polypropylene.

12. (Previously Presented) The system of claim 11, wherein the surface of the sensor for isolating of the transmitting electrodes is coated with Parylene.

13. (Previously Presented) The system of claim 3, wherein the surface of the sensor is made of a conductive material harmless to the human body.

14. (Original) The system of claim 13, wherein the conductive material is SUS316L or gold.

15. (Withdrawn) In a capsule type endoscope put in the human body, a capsule type endoscope, comprising:

a lighting device for irradiating the inside of the human body;

a lens for focusing light incident from the inside of the human body;

a CMOS image sensor for generating an electric signal from the light focused by the lens;
a housing for containing the lighting device, the lens and the CMOS image sensor; and
a transmitting electrode installed on the surface of the housing to receive the electric signal.

16. (Withdrawn) The capsule type endoscope of claim 15, wherein the transmitting electrode is connected to an output line of the CMOS image sensor and is installed on the surface of the housing to be electrically isolated.

17. (Withdrawn) The capsule type endoscope of claim 16, wherein the transmitting electrode is three-dimensionally formed.

18. (Withdrawn) The capsule type endoscope of claim 17, wherein the transmitting electrode includes a first electrode and a second electrode which surround both ends of the housing.

19. (Withdrawn) The capsule type endoscope of claim 17, wherein the transmitting electrode includes a first electrode surrounding an end of the housing and a second electrode covering the other end of the housing as a band shape.

20. (Withdrawn) The capsule type endoscope of claim 17, wherein the transmitting electrode includes a first electrode and a second electrode respectively covering both ends of the housing as a band shape.

21. (Withdrawn) The capsule type endoscope of claim 17, wherein the transmitting electrode includes a first electrode and a second electrode symmetrically formed along a longer axis of the housing.

22. (Withdrawn) The capsule type endoscope of claim 15, wherein the surface of the housing is made of one of peek, polyethylene and polypropylene.

23. (Withdrawn) The capsule type endoscope of claim 22, wherein the surface of the housing is coated with Playlene.

24. (Withdrawn) The capsule type endoscope of claim 15, wherein the transmitting electrode is made of a conductive material harmless to the human body.

25. (Withdrawn) The capsule type endoscope of claim 24, wherein the conductive material is SUS316L or gold.

26. (Withdrawn) The capsule type endoscope of claim 15, wherein the front of the housing is formed as a dome-shaped light receiving window and the rear of the housing is formed as a rectangular container.

27. (Withdrawn) The capsule type endoscope of claim 26, wherein the light receiving window is made of a material harmless to the human body and passing light.

28. (Withdrawn) The capsule type endoscope of claim 26, wherein non-reflection coating is provided on the inner and outer surfaces of the light receiving window.

29. (Withdrawn) The capsule type endoscope of claim 15, wherein the lighting device is an LED.

30. (Withdrawn) The capsule type endoscope of claim 29, wherein the LED has a variable operation time within 5ms ~ 200ms.

31. (Withdrawn) The capsule type endoscope of claim 15, wherein the CMOS image sensor includes:

a pixel array for converting a video signal into an electric signal and storing the electric signal;

a read circuit for fetching the electric signal of the pixel array sequentially;

a coding circuit for coding an output signal of the read circuit;

a switching circuit for changing polarity of an output line according to the coded signal;

a current limiting circuit for restricting flowing of a current more than a certain value;

a control circuit for controlling operation of the lighting device and operation of the CMOS image sensor; and

an oscillating circuit for generating a pulse.

32. (Withdrawn) The capsule type endoscope of claim 31, wherein the pixel array converts a video signal into an electric signal and stores the electric signal while the lighting device irradiates.

33. (Withdrawn) The capsule type endoscope of claim 31, wherein the read circuit fetches and processes the electric signal sequentially while the lighting device is turned off.

34. (Withdrawn) The capsule type endoscope of claim 31, wherein the coding circuit performs PSK coding.

35. (Withdrawn) The capsule type endoscope of claim 31, wherein the switching circuit changes polarity of the output line by making a current flow from the first electrode to the second electrode when the coded signal is "1" and making a current flow from the second electrode to the first electrode when the coded signal is "0".

36. (Withdrawn) The capsule type endoscope of claim 31, wherein the current limiting circuit maintains the current to be not greater than 5mA.

37. (Withdrawn) The capsule type endoscope of claim 31, wherein the current limiting circuit is constructed by connecting resistance serially to output lines of the switching circuit respectively.

38. (Withdrawn) The capsule type endoscope of claim 37, wherein the current limiting circuit further includes a capacitor respectively connected to the resistance in parallel.

39. (Previously Presented) In a method for transmitting a signal from a capsule type endoscope put in the human body to the outside of the human body, a method for data communication in the human body, comprising the steps:

generating electric potential difference between transmitting electrodes installed on the surface of a capsule type endoscope;

supplying a current from a first transmitting electrode having higher electric potential to the inside of the human body to flow the current through the surface of the human body back into the inside of the human body and sinking the current to a second transmitting electrode having lower electric potential; and

inducing a voltage between receiving electrodes installed on the surface of the human body by the current flowing through the surface of the human body.

40. (Original) The method of claim 39, wherein the capsule type endoscope makes a current flow from one transmitting electrode to the other transmitting electrode when a signal to be transmitted is a digital signal "1" and makes a current flow from the other transmitting electrode to one transmitting electrode when a signal to be transmitted is a digital signal "0."

41. (Original) The method of claim 39, wherein a size of the current is limited by connecting resistance serially to the transmitting electrode respectively.

42. (Original) The method of claim 41, wherein a capacitor is connected to each resistance in parallel.